Chinese Investment in the African continent: An analysis of the determinants of Chinese FDI in Africa.

MUNGREE Y K, SEETANAH B, BHATHU-BABAJEE R & GOPY-RAMDHANY N

University of Mauritius

Abstract

The "Chinafrica" relationship has recently been the focus of several international political discourses, whereby the motives behind recent breathtakingly fast upsurge of Chinese FDI in the African continent is being questioned. Hence, the purpose of this study is to analyse why China has been exponentially investing into Africa and it examines the determinants of Chinese FDI in Africa. The conceptual model is based upon the UNCTAD framework of FDI and the investigation is carried out using a balanced panel data from a sample of 25 African countries over the period 2005-2015. To account for the existence of dynamism and endogeneity in the FDI modelling, a Panel Vector Error Correction Model (PVECM) is employed accordingly and this framework also allows for both short-run and long-run analysis. The findings show that market size, resource availability, infrastructure and the Belt and Road Initiative (BRI) were all positively significant in explain the Chinese investment in Africa in the long run, whereby the BRI has the most substantial impact. Moreover, in the long run, it was found that less control of corruption was significant in attracting more Chinese FDI, while there exists no relationship between trade openness and FDI. The VECM results also demonstrate that FDI is dynamic in nature, implying that previous year's Chinese FDI affects the current year's Chinese investment in Africa.

Keywords: *Foreign Direct Investment (FDI), Chinafrica, VECM Framework, Belt and Road Initiative (BRI)*

INTRODUCTION

Over the years, globalisation has boasted the level of foreign investments all over the world, whereby new international relationships were born while the majority of the historical ones were strengthened. One particular historical international relationship that did strengthened, politically and economically, is the China-Africa relationship. Yet, the recent breathtakingly fast upsurge of Chinese Foreign Direct Investment (FDI) in the African continent is unprecedented, as Africa is currently the third largest FDI destination for China. In 2003, Chinese FDI stood at US$ 74.9m in Africa. One and a half decade later in 2018, this has increased to a staggering US$ 52Bn. In 2018, during the FOCAC, Chinese President, Xi Jinping, declared that his nation would be investing US$ 60Bn in Africa, by 2022. This is in addition to the already promised US$ 60Bn, which was invested between 2015 and 2018, mainly by private Chinese investors, in 53 out of the 54 African countries. This strong international investment relationship is popularly referred as "Chinafrique" in Africa, as China's investments are highly welcomed and supported by African leaders.

"Chinafrica" plays a key role in improving infrastructural facilities though better transport, roads, water and electricity supply, boosting productivity by providing capital equipment as well as advance trainings to workers, and raising the Africans' living standard. The Economist stated that without China's consequential involvement in Africa, millions of Africans would still be living under conditions of extreme poverty. Additionally, Chinese investments helped several African leaders to maintain their political power, such as in Kenya, whereby the Chinese enterprises' employment potentials were used into the leader's political agenda. Furthermore, Africans appreciate the fact that Chinese investment comes with "no string attached", compared to Western countries. African think that China sees them as equal business partners, whereby the Chinese authority does not impose any restrictions upon Chinese firms against investing in African parts where there are human rights issues, child labour or environmental scandals.

Consequently, it became an important issue in the international political discourse, questioning the motivations behind such Chinese investments, and their political and economic consequences upon Africa's development. Former US Secretary of State, Rex Tillerson has cautioned African countries to be very vigilant when considering agreements with China and not to endanger their political and economic freedom in the process, while the EU warned the continent about the potential implications of China's Debt Trap diplomatic, by crowding out

the African industries (BBC NEWS, 2018). The debate around China practicing neo-colonialism by hooking African economies with "easy money" gained even more momentum after the debt crisis in Zambia and Djibouti, whereby both nations' sovereignty is endangered.

However, China has perpetually defended its growing engagement in Africa. Liu Kun, China's current Minister of Finance, quoted that "China is investing in Africa to make money, that's what Africa wants too- the challenge is to make it sustainable and not just for the elites" (Staden, 2018). In a 2018 Mckinsey study, it was indicated that there are over 10,000 Chinese firms in Africa, of which more than 90% of them are private entities, depicting that Chinese investments are mainly private companies, responding to market signals. Moreover, China says that its involvement in Africa is an important factor in its quest of becoming a developed country, as it benefits from Africa's growth, whereby in the recent years, five of the world's ten fastest growing economies, are Africa countries. Also, China considers Africa as a key element for the success of China's Belt and Road Initiative (BRI).

In 2013, China introduced the BRI, with the vision to develop and innovate on new overlanding maritime corridors, which would promote trading opportunities between the Chinese market and other parts of the world. It would connect 65 nations in Asia, Europe, Middle East and Africa, involving approximately 63% of the global population, with China at the centre. While few people would connect it to Africa, yet, 40 out of the 56 African countries have already entered into some form of memoranda of understanding and agreements on the BRI. In 2018-2019, Xi Jinping visited all 40 African countries involved, whereby transport and port constructions projects such as highways, railroads, metros and harbours, were proposed to them to develop the BRI in the African region (Li, 2018). Hence, with the Chinese government investing large amounts in Africa, further Chinese investor are also being encouraged to invest in Africa.

The purpose of this study is therefore to analyse why China has been exponentially investing into Africa, by examining the determinants of Chinese FDI in Africa. This study focuses on the classification of determinant variables of FDI provided by the UNCTAD framework of FDI, through a comparative analysis on the impact of market size, resource availability, trade openness, infrastructure, corruption level and the BRI on Chinese FDI in Africa. The main objective of this study is to analyse the main long and short term determinants of Chinese FDI in Africa and it also looks at the impact of the BRI on Chinese FDI in Africa. The research is based on a sample of 25 African countries for the period 2005 to 2017 and employs rigorous

dynamic panel data analysis, namely a Panel VECM, to account for the possible existence of dynamism and endogenous relationship in FDI modelling. This study thus supplements the scarce existing empirical literature on the determinants of Chinese FDI in Africa by i) using more recent data within a larger panel ii) by considering more potential determinants and ii) by also accounting for dynamism and potential endogenous relationship in FDI modelling.

The rest of the paper is organised as follows: section 2 illustrates a literature review by summarising the existing theories and empirical studies in relation to FDI. Section 3 provides an overview of the African-Chinese relationship over the years. Section 4 discusses the methodology and elaborates on data analysis and interprets the findings while section 6 concludes.

LITERATURE REVIEW

Theoretical foundations of FDI

The predominant theories that extend on the motives of FDI as an internationalization process are Hymer's theory of FDI, Vernon's International PLC theory, the Internalization theory by Buckley and Casson and lastly, Dunning's Eclectic theory of FDI (Denisia, 2010). Hymer (1960) theory of international production remains one of the most pragmatic theories of FDI (Voss, 2011) and it indicates that MNEs would prefer to engage in FDI to supply foreign markets instead of exporting, in order to exploit market imperfections in international markets, as MNEs possess certain advantages which allow them an edge over local entities to profit from. Those advantages include firm-specific assets or advantages, such as market power generated through patents protecting the research and production quality technology, global brand recognition, marketing and management dexterity, economies of scale and cut-rate financing facilities (Khan and Khachoo, 2012). Hymer(1976) also emphasized on compensatory advantages as such imperfect competition through product differentiation, the economies of scale arising from vertical integration and bypassing of import restrictions. Yet, the most important advantage is technological superiority, as it facilitates the development and innovation of new products with new features, enhancing product differentiation (Hymer, 1976). Kindleberger (1969) built on Hymer's theory and theorized that it is the market structure that determines the operations of MNEs, instead of MNEs activities influencing the market structure, through the internalization of production. Caves (1971) subsequently stretched on

Hymer's theory by suggesting that FDI is related to trade barriers in order to limit shocks in supplies to impose entry barriers to new firms on the external market.

In contrast Vernon (1966) developed the International PLC Theory as a congruent foundation of FDI and he used his theory to clarify the reasons US manufacturers were shifting to setting up operations abroad some years following the World War II, instead of exporting. The theory elaborates that a product's life-cycle consists of four main stages: innovation, growth, maturity and decline, whereby a company develops or invents a product and ultimately engages in FDI as a way to extend the life-cycle of the product through more extensive growth phases and slower maturity by exploiting the firm's advantages abroad (Vernon, 1966). It was successful in explaining most US FDI in Western Europe for numerous years.

Furthermore, Buckley and Casson (1976) came forward with the Internalization theory, which indicates that the factors explaining that MNCs will tend to organize their internal operations abroad based upon the notion of transaction cost internalization. The theory mainly argued the intermediary costs represent a huge proportion of transaction costs, and it can be minimized if markets are integrated by MNEs. The MNEs have several propriety assets which are intangible ones, such as the level of marketing, copyrights and trademarks, patents, inventive ability, advance designs, etc. whereby it is very difficult and costly to transfer such assets to sell or lease. Hence, FDI enables MNEs to be more efficient internally by preventing hindrances generated by transaction expenses, bargaining and customer uncertainties, time lags in operations, alongside other negatives externalities in a market (Elfakhani and Mulama, 2011).The primary strength of this theory refers to its aptitude to deal with the problem of supplying a foreign market through licensing or by setting operations abroad.

The Eclectic theory, also known as OLI (Ownership, Location, Internalization) paradigm, is the infusion of the Internalization and Hymer's theory, together with a locational dimension. According to Dunning (1976), a nation will not be considered as an attractive FDI destination solely by having a cheap labour force, abundance of natural resource and a large customer base (Osorio, 2008). He therefore provided the famous and flexible OLI framework, suggesting that FDI decisions shall be determined through the set of OLI advantages, whereby for a firm to successfully set up operations abroad and undertake FDI, it will need to satisfy and possess all the OLI advantages. Ownership (O) advantages refer to assets that are concentrated within the firm, that is, specifically for the firm, which is derived from tangible assets such as physical capital and technological equipment, as well as intangible assets such as brand and reputation,

excellent management expertise and quality of human capital (Ayadi, 2014). They provide an exclusive advantage over other competitors. Location (L) advantages include various advantages for a firm to set up operations and invest in a country, making it a more attractive FDI destination compared to others. For example, MNEs might decide to invest in foreign production facilities due to advantages such as cheap and skilled labour, supply of natural resources, the economic benefits such as having a large and protected market environment, diminished transport expenditure and the political advantages such as the legal framework, absence of corruption, the tax regime and tax benefits, the import trade barriers and the other different incentives from the local government. They are the only specific determinants that government can directly influence. Internalization (I) advantages refer to the benefits that emerge when a firm retains its explicit data and knowhow, and other resources including technology and expertise, internally. The firm would be able to enjoy full control over its foreign business conduct through Greenfield investment, compared to exporting, licensing or franchising, whereby firms are more susceptible lose control over (Ayadi, 2014). Accordingly, in 1993, Dunning depicted that investors are seeking for four motives when undertaking FDI; the resource-seeking, market-seeking, efficiency-seeking and strategic asset-seeking motives of FDI. Based upon the OLI framework, those motives explain why, where and how a firm is willing to invest or set up operations abroad (Franco, 2008).

A MNE would engage in (1) resource-seeking FDI if its purpose of foreign investments is to take advantage and exploit the different types of resources that the nation possesses; it can be natural resources such as of metals, minerals, oil and further raw materials, and other resources like human capital, which are at lower prices and more abundant supply abroad (Dunning J. , 1993). A country's natural richness is therefore the key element attracting such FDI. An entity with (2) market-seeking FDI is allured by the host country's market size, growth rate and investment environment, whereby the firm is willing to expand its customer base. The investment is undertaken in a way that it can compete against the local rivals, with similar production standards in order to meet the local supplier's and customer's demand (Voss, 2011). Similarly, other factors driving market-seeking FDI include the socio-cultural nature of the host market, the trade barriers and local needs or tastes of customers (Dunning, 1994). The (3) efficiency-seeking FDI occurs when a firm is seeking for low cost business environment such as infrastructural facilities, cheaper labour force in poorer countries, while maintaining the efficiency and quality of production (Franco, 2008). Lastly, the (4) strategic asset-seeking FDI motive is one whereby the firm's aim to invest in foreign markets is to gain intangible assets

such as brand name or R&D capacities, market intelligence, technological expertise and management dexterity and other knowledge that do not exist at an advanced level within its firm (Atterby and Brilkman, 2011).

UNCTAD framework of FDI

Since 1991, based upon several FDI studies and surveys, the UNCTAD has been publishing an annual "World Investment Report", providing information concerning the most recent trends and development of FDI worldwide, at regional and country levels. The UNCTAD designed its own methodology of FDI determinants so as to explain the annual global FDI trends, whereby the organisation classifies five major determinants of inward FDI. It includes (1) Market-related economic determinants, (2) Resource-related economic determinants, (3) Policy variables, (4) Efficiency-related economic determinants and (5) Business variables as demonstrated below:

Table 1: Determinants of inward FDI

DETERMINANTS/VARIABLES	EXAMPLES
MARKET-RELATED ECONOMIC DETERMINANTS	Market size, actual and potential economic growth rate, socio-cultural factors
RESOURCE-RELATED ECONOMIC DETERMINANTS	Natural resources availability, raw materials, technology, human capital
POLICY VARIABLES	Tax regime, trade policy in terms of trade openness and barriers, macroeconomic policy, privatization policy
EFFICIENCY-RELATED ECONOMIC DETERMINANTS	Infrastructure facilities such as road, communication and transportation, labour cost and productivity
BUSINESS VARIABLES	Investment environment, political and social stability, corruption, and business incentive schemes

Source: Chawla, 2015 ;(UNCTAD, 2002)

The left hand-side of above table depicts the UNCTAD's classification of FDI determinants while the on right are illustrations of such determinant variables. Several researches over the foundation of FDI have been done throughout the 2000s, supporting this framework. For instance, Fanbasten and Escobar (2016) used this framework to examine the FDI determinants of MINT countries, whereby they found that all the determinants were significant in explaining the FDI inflows in those countries. Similarly, previously studies have found that corruption is

a major element to consider in the FDI decision making as depending on the firm's view, it is a factor that certainly determines the attractiveness of a country for FDI purposes, which the UNCTAD framework included (Chawla & Rohra, 2015). This framework therefore depicts explanatory variables that englobes the different factors which might influence modern FDI decisions.

Related Empirical literature

An overwhelming amount of literature exists on the determinant of FDI, based on various country case studies and samples as well, with a majority identifying economic growth, education, infrastructure, natural resources as well as political stability as the main ingredients favouring FDI (see Khadaroo & Seetanah, 2009; Tokunaga & Iwasaki 2017 and Paul & Feliciano-Cestero,2020 for recent reviews of the related literature). In what follows we focus on the related work undertaken in the African region. Among the first studies was that of Lucas (1993) who examined the FDI determinants of the East and South Asian economies, for the period 1960 to 1987. His main findings report that FDI flowing in those countries are more responsive to capital costs than labour expenses and influenced by the host country's trade liberalization whereas the domestic market size and aggregate consumption were reported as insignificant to determinant the FDI inwards.

Guisinger (1995) examined the factors determining the US' foreign investment flows in developed and developing nations, including African nations, for the period 1977 to 1982, in terms of policy and non-policy explanatory variables. The findings suggest that the host country policies around its investment incentives, local performance threshold and tax regime are significant in both developed and developing countries, with interesting divergences. Similarly, non-policy variables such as political stability, cultural divergences, GDP per head, and infrastructural facilities are found to be significant in explaining US FDI outwards to both developed and developing countries.

Sharma (1997) studied the main FDI determinants in Africa through a sample data of 15 Sub-Saharan regions between 1980 and 1995 whereby the relationship between FDI % of GDP and determinants such as economic growth, fixed capital formation, openness, level of national debt, exchange rate, inflation and yield on government bonds was assessed. The main results showed that for FDI flows in Africa, key variables were GDP growth, openness and exchange rate, with expected signs while national debt level was significant in a contradictory manner. It shows that Africa's inward FDI is primarily for market-seeking purposes. Subsequently,

Morisset (2000) conducted an empirical study with a dataset of 29 African countries from the Sub-Saharan region, for a time period starting 1990 to 1997, in order to analysis which the determinants that are influencing investors' decisions for foreign investment in Africa. The author highlights resource seeking motives are not necessarily the go-to factor. The main findings indicate that GDP growth as well economic and openness in trade facilities are significant in attracting foreign flows into African countries.

One of the most prominent studies on the subject was the one carried out by Asiedu (2002), who investigated whether the determinants of inward FDI in developing countries differentiate from those of SSA countries. He examined around 35 developing countries allocated in SSA and 36 additional developing countries from various parts of the globe, for the period starting 1988, to 1997. The author's main findings showed that determinants driving foreign cash into developing economies do not reflect the same impact upon foreign investments in SSA. Infrastructural facilities and greater yield on capital expenditure were highlighted to positively impact the foreign cash inflows into developing countries outside the SSA area mainly, whereas economic openness was deemed to be significantly beneficial for developing countries from both SSA and non-SSA areas.

Onyeiwu (2004) highlighted that even though there have been reforms in the African economic and institutional infrastructure, the foreign investment flows have been perpetually unequal and mediocre. The authors conducted a study, using a dataset consisting of 29 African nations, to examine the variables influencing their inward FDI, for the period starting 1975 to 1999. This study's main findings point out that determinants such as economic growth, inflation, economic openness and resource seeking proxies, are all significant in explaining why Chinese investors are attracted to African countries. On the other hand, factors such as political equality, infrastructural facilities and conventional social wisdom were not significant determinants for Chinese investors when looking for African investment avenues.

Another important piece of research concerning the African determinants of FDI was conducted by Asiedu (2006), whereby she analysed the FDI determinants in 22 countries in SSA, for a time period starting 1984 to 2000. The main findings indicated that the availability of natural resources, large domestic market size, low inflation and proper infrastructural facilities are key determinants for foreign investors. Additionally, she highlighted that corruption and political stability are also significant factors influencing foreign investment

flows in Africa. The author also reported that countries with smaller market size and lacking in natural resource endowment should improve their institutions to attract foreign investment.

Suliman (2009) had studied 29 countries from the SSA region from 1980-2003 in order to accentuate on which factors attracts FDI into the Sub-Saharan region. Numerous determinants were tested, including Adult literacy, freedom, real GDP, openness, market liquidity, infrastructure and FDI lag. The authors' main findings showed that the literacy rate, political and civil freedom and openness were all considerable determinants to the FDI inflows in that African region.

Sane (2016) investigated determinants of FDI in the ECOWAS for the years 1985-2015. His findings suggest that the level of national consumption, interest rates, fixed capital formation, currency value, financial freedom, natural resource endowment and domestic market size are key determinants in influencing the FDI attractiveness of the ECOWAS. Wakyereza (2017) studied the effects of determinants such as economic growth, nature resource availability, labour cost, political stability, and education on FDI in Uganda for the period starting 2006 to 2015. The author found that resource availability and labour cost was significant in explaining FDI inflows in Uganda. More recently.

While are exist a relatively good amount of literature on the determinant of FDI in Africa in general, studies focusing on Chinese FDI to Africa has been more scant. One the first work relates to Wahid (2008) who examined the numerous potential FDI determinants for 20 African countries for the period 1990-2005. The author reported that all the determinants which have been studies were significant in explaining Chinese FDI in African countries, whereby natural resources, stock of human capital, domestic market size and openness played a positive role, whereas political instability and labour cost played a negative role as determinants of FDI. Claassen (2012) subsequently studied the determinants of Chinese FDI flowing into Africa starting 2003 and found that domestic investment, market size, agricultural potential and oil has been positive and significant determinants of Chinese FDI.

Breivik (2014) studied the factors which might be significant in explaining Chinese investments in Africa, based on sample panel data of 49 African countries for the period 2003-2011. The econometric analysis confirms that market size as well as availability of natural resources are significant African determinates for Chinese flows. Interestingly, good institutions were found to be very much significant. Ross (2015) in his study of 8 African countries (including Nigeria, South Africa, Zambia, Ghana, Kenya, Algeria, Egypt and the

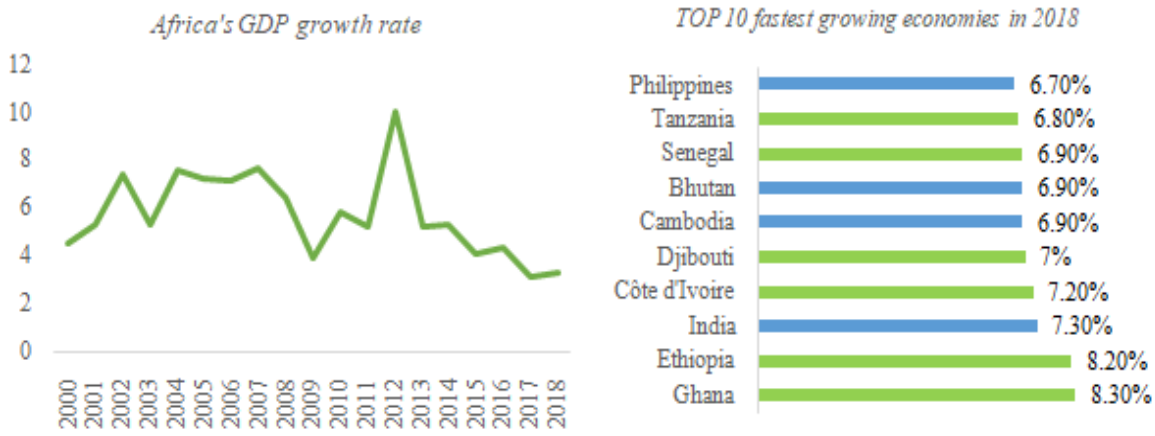
Sudan), for a time period of 2003-2012, found that natural resources, infrastructural facilities as well as the local regulatory environment were major determinants driving Chinese OFDI into those African countries. It also laid emphasis on how the growth and development potential of African countries are also salient in attracting FDI, particularly Chinese investments.

More recently Gandhi (2019) conducted a study over the trends and determinants of Chinese investments in the African countries, whereby the dataset constituted of 20 African countries which were the biggest Chinese investments recipients, for the time period 2003-2014. The relationship was tested against determinants including economic openness, market size, natural reserves, political and economic stability as well as geographic location. The study found political and economic stability were not significant in explaining the investment flows from China, whereas the proxies of economic openness, market seeking motives and resource seeking motives were all positive and claimed to be significant, based on empirical data.

Chinese FDI to Africa

Africa is the wealthiest continent when considering the global natural resources reserve of precious stones and metals such as gold, diamond, iron, cobalt, uranium, copper, bauxite, silver as well as one of the biggest oil reserves in the World, such as in Nigeria. The World Bank indicated that Africa has been the fastest growing continent on the globe for the past decade and became the fastest urbanizing region on the planet whereby in 2018, 6 out of the 10 fastest growing economy in the world, were African countries.

Figure 1: Africa's GDP growth rate



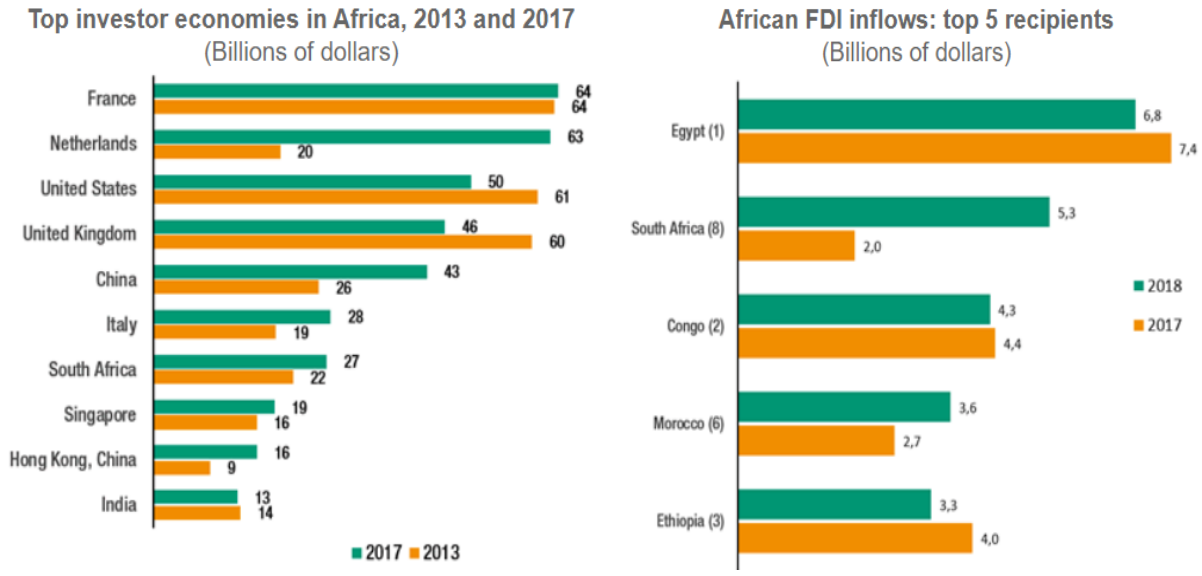
Data Source: World Bank

This exponential growth rate, with its rising levels human capital and natural resources, has made the African region the most attractive avenue for investment on the verge of development. Huge amount of foreign investments has been flowing into Africa, with the largest investing countries being the U.S, France, and the UK, respectively; while China's financial involvement has been the fastest growing one, in terms of number of projects.

Figure 2: FDI in Africa, Net Inflows

Data Source: World Bank

Figure 3: Top Investor Economies in Africa & African FDI Inflows: top 5 recipients



Source: UNCTAD

African countries are on the fast-lane growth path, and this has attracted foreign investors to invest in the African region. China represents the foreign investor which has been the most positively attracted to the continent, displaying one the highest percentage increase in FDI

flows to Africa over the last decade, and is willing to capitalize on the investment opportunity[1]. As Chinese internationalization developed globally, new initiatives were created such as the BRI in 2013, we can see that China had started investing abroad heavily, reaching an all high US$ 216Bn in foreign investment in 2016. With such extensive investment all over the world, new international relationships were born while the historical ones were strengthened. One particular historical international relation that did strengthened, is the China-Africa relationship.

China- Africa relationship

China and Africa are historically politically and economically tied, whereby it evolved from ideologically driven relations to pragmatic economic and political interactions. Modern China-Africa relations date back to the IBC, a large Asian-African Conference, aiming "to promote Afro-Asian economic and cultural cooperation and to oppose colonialism or neo-colonialism by the United States, the Soviet Union, or any other imperialistic nation" (Ayenagbo et al., 2012). China and Africa's first diplomatic relationship date back to 1956, with Egypt. However, after Chinese leader Mao's death, new leader Xiaoping had amended China's relations to Africa whereby ideological concerns were overlooked for economic objectives, as the priorities of the Chinese changed.

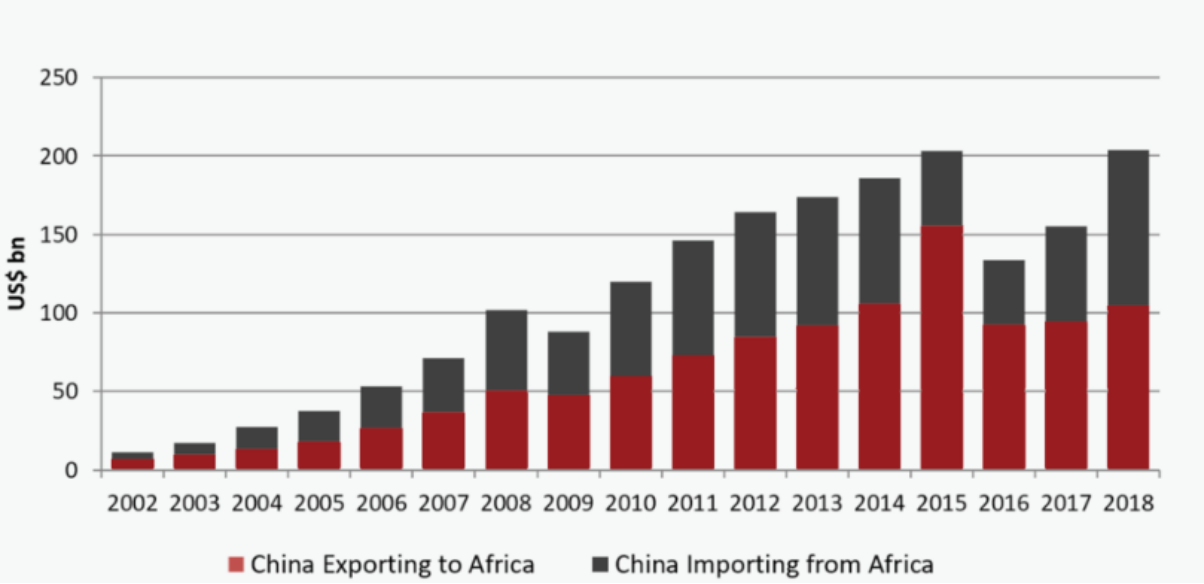
Today, China maintains an economic connection with most African countries and the latter play a major role for Chinese policymakers on an international basis. Officially, their international proximity is based on "the three pillars of political, educational, and economic cooperation". The political pillar refers to the political support those Chinese vows to African partners, under UN and other international institutions' conventions, but also, requiring a similar intensity of support by African countries. Educationally, China has provided for the construction of several scholastic domains and provided for numerous scholarships for African students.

Yet, the most important pillar remains economic. Trade and investment relations between these two region grew gigantically, whereby in 2000, the FOCAC was established, so as "further strengthen the friendly cooperation between China and Africa, and to jointly meet the challenge of globalization and promote common development" (FOCAC, 2019). Chinese trade in African

[1] In 1999, Chinese authority came forward with the "Go global" strategy and FDI took off exponentially. Chinese government was easing the path for local companies to set up operations abroad with a coherent institutional framework and several other incentives to promote foreign investments.

countries certainly took off from there. Nonetheless, trade relationships became more unbalanced since 2014, whereby weak commodity value has significantly dropped African exports to China, whereas Chinese exports to Africa remained quite steady.

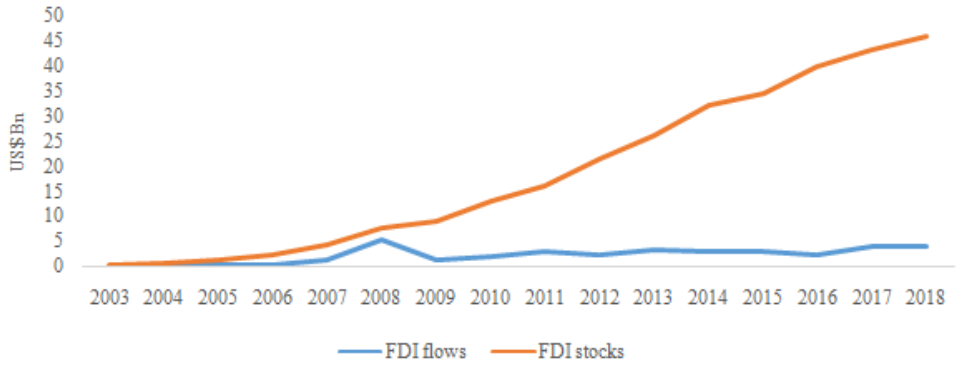
Figure 4: Chinese-African Trade (2002-2018)



Source: UN COMTRADE (2019)

The post financial crisis era saw a rise in Chinese imports into Africa, as in 2015, China exported over US$150Bn worth of goods and services in the continent. This has opened more economic routes; whereby African countries have targeted Chinese as a major recipient to develop their tourism industry. Even though they just represent a minority among tourists visiting Africa, every year there are more and more Chinese visiting the continent. For instance, in 2016, 10% of the total Chinese tourist visited African countries, which was only 3% in 2006. Over a decade, Chinese tourists visiting African countries have more than tripled, whereby the Chinese's main touristic destinations included Egypt, Kenya, Morocco, South Africa, Mauritius and Tanzania. This relationship was the foundation to build up an investment atmosphere and with the Go-Global strategy, their investment relationships strengthen, with China willing to pitch in the fastest growing continent's economy, especially in particular African countries and specific sectors.

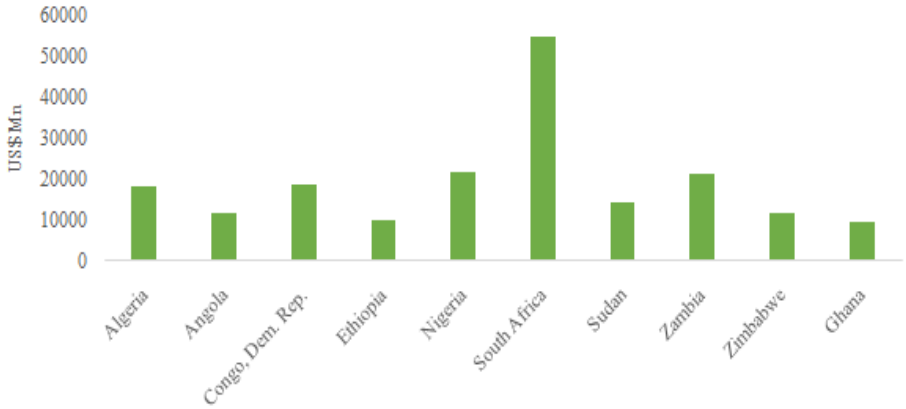
Figure 5: Chinese FDI in Africa



Data source: AEI

While FDI flows have been constant throughout the years, Chinese investment stocks have exploded in Africa, and these investments were directed mainly towards a large number of African countries. Yet, it is important to note that there are some African countries which have attracted much more Chinese flows than others in the continent, whereby the top 10 African avenues for Chinese investments include the following.

Figure 6: Top 10 recipients of net Chinese FDI in Africa (2005-2017)

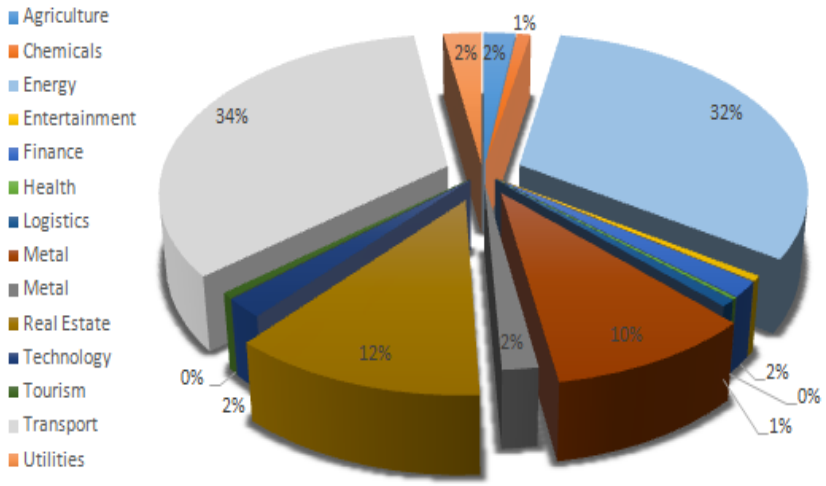


Data source: AEI

Chinese investors have invested approximately US$ 10Bn or more in their top 10 African investment avenues from 2005 to 2017, whereby the main target was South Africa, witnessing around US$ 55Bn worth of net investments from China for the time period. It is equally important to mention that while China invested heavily in particular African countries, they also planned those investments into specific African sectors

.

Figure 7: Private Chinese FDI in African Sector (2005-2018)



Data Source: AEI

We can clearly see that China has been heavily investing into the energy and transport sectors, while the African metal and real estate sector also represents a large portion of those investments. While the investment in the energy sector shows that oil and other forms of fuel did attract a lot of those investors, China also wanted to develop the transport facilities in African countries, as the role that Africa is expected to play in the success of the BRI, requires a safe and modern transport system.

Research Methodology and Analysis

Regression Model

The regression model used in this research study is motivated by availability of data and prior diligent studies carried by Asiedu (2002), Breivik (2014) and Wakyereza (2017). This study focuses on the UNCTAD framework of FDI determinants, whereby it classifies the five major determinant variables of inward FDI, namely (1) Market-related economic determinants, (2) Resource-related economic determinants, (3) Policy variables, (4) Efficiency-related economic determinants and (5) Business variables and each determinant variable shall be represented by a relevant proxy.

The proxies used to represent each classification of UNCTAD's determinant variables of FDI are (1) market size, (2) resource availability (3) trade openness, (4) Infrastructure facilities and (5) corruption, respectively. Moreover, a dummy variable has been included, presenting the Chinese BRI, to access its impact in determining Chinese investment in Africa. Thus, the

function formulated to analyse the relationship between Chinese FDI in Africa and the market size, resource availability, trade openness, infrastructure, corruption and the BRI is as follows:

$$FDI = f\{MSIZE, RES, TOPEN, INFRAS, CORR, BRI\} \text{ --------- } (1)$$

Where,

FDI: Chinese FDI in Africa; **MSIZE:** Market Size; **RES**: Resource Availability; **TOPEN:** Trade Openness; **INFRAS**: Infrastructure facilities; **CORR:** Corruption; **BRI**: Belt and Road Initiative

Data sample

This study uses an annual secondary dataset, consisting of a balanced panel dataset of 25 African[2] countries over a 13 years' time period (based on data availability), starting 2005 to 2017, totalling to 325 observations.

Description of Variables

Chinese FDI in Africa

Chinese investment in Africa shall be measured through the Chinese FDI stock in African countries over the host country's GDP. FDI stock refers to the total value of share capital and reserves of subsidiaries as well as their net indebtedness which belongs to the investing company (UNCTAD, 2019). It is a better proxy for representing Chinese FDI than FDI flows, because of several aspects. Firstly, it measures capital ownership, which represents the foreign investment of local capital markets. Furthermore, FDI flows might be highly skewed, due to large investments through acquisitions and takeovers, particularly in smaller nations, whereby it is more unstable in comparison to stocks (Chiappini, 2014). This ratio is a widely used proxy for measuring FDI, used in studies such as Adeisu (2002) and Goospeed (2t006).

Market size

A country's domestic market size depicts a nation's economic strength alongside its potential purchasing power, and is regarded as a salient element for market-seeking FDI (Chakrabarti, 2001). Hence, market size is measured by the real GDP per capita of the host country, representing the total national output per head in the country, adjusted for inflation; supported

[2] The 25 African countries considered in the sample section are; Angola, Algeria, DR Congo, Republic of Congo, Egypt, Ethiopia, Gabon, Ghana, Guinea, Equatorial Guinea, Kenya, Liberia, Madagascar, Mali, Mozambique, Mauritius, Namibia, Niger, Nigeria, Sudan, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

by Tsai (1994), Loree and Guisinger (1995), Lipsey (1999), Wei (2000) and Wahid (2008). It is a magnet for the economy whereby it attracts FDI into the country as it attains a specific level or threshold which is sufficiently large to generate economies of scale and efficiency in the usage of resources (Mauer and Scaperlanda, 1969).

Natural Resource availability

Dunning (1976) indicated that countries with a higher degree of natural resource endowment would be more likely to attract FDI. In a study involving African countries, the main estimates would be highly biased in case there is an omission of a proxy for natural resources from the equation (Asiedu, 2002). The proxy used to measure natural resource availability is the sum total of oil, natural gas, coal, mineral and forest rents as a percentage GDP, which is calculated by dividing total natural resources rent over GDP. Several studies such as Warner (1995), Asiedu and Esfahani (2001) and Aseidu (2002), have used this proxy as a measure of natural resources, confirming the natural resource-seeking FDI hypothesis (Voss, 2011).

Trade openness

Trade openness is measured by trade as a percentage of GDP, which is calculated by dividing the total flows of exports and imports over GDP. Empirical works of Jun and Singh (1996), Kandiero and Chitiga (2006) and Wahid et al. (2009) are among the researchers who support the notion that openness is a highly favourable factor which triggers economic development and FDI in a country, as investors have better access to investments and bigger markets (HUFBAUER, 1994). Yet, evidences through the "tariff jumping" theory also suggest that if FDI is market seeking, then openness is likely to discourage foreign investments (Blonigen, 2005). Investors would be willing to tap-in countries with trade barriers, which is yet to be exploited by international products.

Infrastructure facilities

Infrastructure shoulders a significant role in attracting foreign investments, particularly in African countries (Vijayakumar, 2010). Infrastructural facilities can be assessed through various ways, including internet access, telecommunication and transport facilities, and power supply. For this study, infrastructural facilities' proxy shall be the number of mobile phones per 100 people. This is in accordance with the efficiency-related FDI determinants, used in the UNCTAD framework (Akpan, 2014). According to Hymer, firms would consider business advantages resulting from good transportation services and proper telecommunication access

which lowers costs linked with infrastructure, in their investment decisions, as supported by Asiedu (2002) and Ross (2015).

Corruption

Corruption is a key institutional factor that can determine FDI in a country whereby high levels of corruption may discourage the flow of FDI (Smarzynska, 2000). Corruption includes bribery and any other activities of people, having obligation in the public or private sector, which disrupt their responsibilities for selfish gains (Gasanova, 2017). The proxy used for Corruption is the control of corruption index, whereby the index ranges from +2.5 to -2.5. The closer the index to +2.5, the better is the public perception that corruption is tackled or mitigated in the country; thus less corruption. Similarly, a negative figure represents a corrupted economy. Studies such as Mauro (1995), Wie (2000) and Agostino (2016), have shown that countries with good regulatory framework attract more FDI (Peres, 2018). However, some scholars based themselves on the "grease in the wheel of commerce" or "helping hand" theory of corruption, to illustrate that corruption helps to evade unnecessary operational costs in democratic regimes with illicit functioning of bureaucracy and thus encouraging inward FDI (CUERVO-CAZURRA, 2008).

Dummy variable: Belt and Road Initiative (BRI)

The BRI aims improving connectivity and boost trade activities and investments throughout BRI countries, through infrastructural investments. Moreover, it is important to note that while the BRI was formally introduced in 2013, yet, as per the Brookings Institution, in 2012, infrastructural developments such as railways and harbours in African countries for the Maritime path of the BRI had already started such as 740-km electric railway in Djibouti worth US$ 4Bn and the US$ 5.6Bn Chad railway network. This explains why occurrence year started as at 2012 in this study. Moreover, the AEIS (2017), through a detailed summary of China's OFDI, shows that since the introduction of the BRI, there has been an increasing investment flow in construction projects in BRI countries, both by the Chinese authority as well as by private investors. The infrastructural projects such as railways, roads, ports and water supply that Chinese government invested in African BRI countries has played a positive role in encouraging private Chinese investors to invest in Africa. Dollar (2017) pointed out that Chinese investors' ability and impulse to take risk for greater gains, may benefit African BRI countries. Data were made available from the World development indicator except for Chinese

FDI to various African country which was compiled from the China Statistical Yearbook: "Overseas Direct Investment by Countries or Regions"

The econometric version of model (1) in logarithmic form[3] is as follows:

$$\boldsymbol{LOG\ FDI_{it} = \beta_0 + \beta_1 lOG\ MSIZE_{it} + \beta_2\ LOG\ RES_{it} + \beta_3\ LOG\ TOPEN + \beta_4 LOG\ INFRAS_{it} + \beta_5\ CORR_{it} + \beta_6 BRI_{it} + \varepsilon_{it}} \text{------ (2)}$$

From equation (2),

FDI_{it} denotes the net Chinese FDI stock in Africa at time t;

RES_{it} is the resource availability at time t;

$MSIZE_{it}$ refers to the Market size at time t;

$TOPEN_{it}$ represents Trade openness at time t;

$CORR_{it\ refers}$ to the Control of Corruption Index at time t;

BRI_{it} denotes the Belt and Road initiative, dummy variable.

β_0 refers to the constant term while $\beta_1 - \beta_6$ symbolises the parameters for the exogenous variables. The other symbols in the equation include $\boldsymbol{\varepsilon_{it}}$which represents the random disturbance term, $\boldsymbol{i}$ referring to the country while $\boldsymbol{t}$ represents the time period.

This paper employs dynamic panel data analysis given the dynamic nature of FDI modelling, particularly the fact that past FDI can influence current level of FDI due to word of mouth and also increased confidence of current investors (Khadaroo and Seetanah, 2009). Moreover, there also exists the possibility of endogenous relationship. We thus accordingly use a Panel Vector Autoregressive model (PVCEM) which takes into account the above issues.

Analysis

Unit root tests (Levin, Lin and Chu (LLC) Test, Im, Perasan and Shin (IPS) Test and Augmented-Dickey Fuller (ADF)Test) were conducted to test the stationarity of the data whereby at level, the tests indicated that the variables were non-stationary. Hence, the tests

[3] Logs were introduced on both sides to transform the variables to their natural logarithmic form, in order to diminish the impact outliers might have upon our data and normalize our data distribution as well as for ease of interpretation.

were performed at first difference with an automatic lag length selection using the Schwartz Info Criterion (SIC). The results indicated that the variables were stationarity at first difference (I (1)). The Pedroni and Kao panel co-integration tests (The Panel and Group PP-Statistic alongside the Panel and Group ADF Statistics tests) and Kao Residual Co-integration Test confirmed the presence of co-integration among the variables. A Vector Error Correction Model (VECM) was subsequently estimated and both the long and short run estimates are presented in what follows.

Long-run Dynamics

The estimation of the long run coefficients are summarised in table 6 below .

Table 2: Long-run results of the VECM model

Variables	Coefficient	T-Stat
LOG FDI	1.000000	
LOG MSIZE	5.462947	3.55435***
LOG RES	7.848415	1.94317*
LOG TOPEN	-3.694105	-1.08417
LOG INFRAS	8.234114	3.21340***
CORR	-9.415047	-1.77011*
BRI	34.50642	8.36521***

Source: Author's computations

Level of significance: *(10%), ** (5%), *** (1 %)

Market Size

Market size is a key determinant in attracting Chinese FDI in Africa as the findings show a positive and significant relationship with FDI, whereby it demonstrates that a 1% growth in African GDP per capita would boost its Chinese FDI by 5.5%. This is in line with Hymer, Dunning's Eclectic theory and UNCTAD framework, which elaborate that firms seek for FDI destinations with larger market prospects in order to have a much bigger consumer base, as

they are not looking for niche markets (Agiomirgianakis, 2004). Hence, our findings indicate that Chinese FDI in Africa is market-seeking FDI. Furthermore, Duanmun (2006) reports that Chinese firms have been heavily engaging in FDI for market-seeking motives based upon the greater economic returns that growing markets signifies (Demirhan, 2008). Moreover, the works of likes of Erdal (1982), Barrell (1997), Tatoglu (2002); Vijayakumar et al (2010); Jadhav (2012) and Akpan (2014) confirm the validity of our findings. Ross (2015) showed that GDP and real GDP per capita are significant in attracting more foreign investment in Africa. Similarly, Loree and Guisinger (1995) and Wahid (2008) confirmed the positive and significant relationship between real GDP and FDI inflows in Africa.

Resource availability

Due to the deficiency of required capital and expertise in the African extraction industry in terms of oil, precious stones and so on, foreign investors with natural resource-seeking motives are call upon to bridge the gap in Africa, whereby higher returns are available as well (Kinyondo, 2012). This is confirmed by our findings whereby there is a positive and statistical significance between the total natural resources rents (% of GDP) and Chinese FDI in Africa. This reports Chinese investors undertaking resource-seeking FDI, which aligns with Dunning's eclectic Paradigm and UNCTAD framework, as the results indicate that a 1% rise in the African natural resources (% GDP) would boost Chinese FDI by 7.8%. Chinese investors are willing to tap-in countries which can supply the necessary oil and other natural resources to continue on being a global superpower, whereby as per our sample, Chinese investors have heavily in Angola, Democratic Congo, Nigeria and Congo, African countries which are gifted with extensive richness of natural resources.

The result is in line with the results of Warner and Sachs (1995), Aseidu (2002) for African case, Kinoshita and Campos (2004) and Sichei and Kinyondo (2012). Ross (2015) also shows that Chinese FDI is positively and heavily influenced by the African natural resource endowments as he suggests that African has gained greater prominence on the Chinese agenda due to China being increasingly reliant on energy in order to satisfy its extensive domestic consumption of energy resources for production uses.

Trade Openness

Trade openness of African countries fails to provide such an impact on Chinese FDI as per our findings, with a reported negative yet insignificant relationship. Evidences through the “tariff jumping” theory suggest that if FDI is market seeking, as it is the case as per our findings, then

openness is likely to discourage foreign investments (Blonigen, 2005). Chinese investors are looking for markets that are yet to be exploited; they are seeking to tap-in countries with trade barriers, where they can be pioneers.

The effect and impact of openness on FDI depends on the type of FDI (Asiedu, 2002). The insignificant relationship between trade openness and FDI is supported by the studies of Kandiero and Chitiga (2006); Ghosh (2007) and Tsaurai (2015). Ross (2015) also reports a negative and insignificant relationship between Chinese inward FDI and African trade openness and explains Chinese FDI to be resource and market seeking, within closed boundaries, increasing the probability of greater economic benefits.

Infrastructure

A major obstacle in attracting FDI in African countries has been their poor infrastructural facilities (ODI, 1997).The results confirms that there is a significantly positive relationship between infrastructure and Chinese FDI in Africa. This aligns with the UNCTAD framework, which emphasizes on the importance of well-developed communication infrastructure to reduce the investors' costs and improve efficacy and efficiency in business activities, which would ultimately attract more foreign investment in Africa. The results are also in line with several empirical studies, such as Wheeler and Moody (1992); Kwan (2000); Sun (2002); Asiedu (2002); Vijaya kumar et al (2010) and Ross (2015), whereby the latter indicates that private Chinese investors have been reluctant to invest in Africa's countries which are notorious for inadequate and poor infrastructure. Moreover, Demirham (2008) reported that Chinese companies emphasizes on the infrastructure of the host country, since proper infrastructure helps boast productivity and protect investments. Hence, as international standards deem Africa's infrastructural facilities as relatively weak, those which have been able to provide proper infrastructure, were able to attract Chinese FDI.

Corruption

Corruption is another factor of crucial importance in the determination of FDI, yet this study highlights its significance in a different way. According to the results, control of corruption in Africa has a negative relationship with Chinese FDI, whereby control of corruption is likely to discourage Chinese FDI. This implies that Chinese FDI is attracted to the corrupt African countries, whereby as the control of control decreases, which is similar to corruption increasing, Chinese investments in Africa also increases. For instance, Zimbabwe, Zambia, Republic of Congo and Liberia form part of the African countries which received the largest

Chinese FDI as per our measurement of Chinese FDI stock over GDP while they were simultaneously amongst the most corrupt African countries in our sample.

Chinese investors support the famous grease hypothesis, whereby "speedy" or "greasy" money fasten the movement of transactions and activities in the Africa. It eases the bureaucratic pressures and encourages ease of doing business for those who can afford to bribe. Several studies such as Lui (1985), Lien (1986), Saha (2001), Glass and Wu (2002), Egger and Winner (2005), Barassi & Zhou (2012) and Gutierrez (2015) provided proof that corruption is advantageous in developing economies as it ultimately induces FDI inflows by greasing the wheels of commerce.

Belt and Road Initiative

The World Bank, in a recent report, suggested that aggregate FDI in BRI countries is expected to grow by 5% on average, whereby participating countries in Sub-Saharan Africa and East Asia and Pacific shall be experiencing greater potential gains. The statement is in line with our results, whereby the occurrence of the BRI's projects in Africa, has boosted China's investment by 34.5% into the continent. The BRI is forecasted to cost over $5-6Tn and China considers Africa as a key element for its success, not only for its large customer base, but also to serve as Chinese port to trade with countries in Europe such as France and Spain and other parts, such as the US (Lin, 2018). It is in line with Kang and Zhu's (2018) work, indicating that after the initiative, China increased investment in BRI countries.

Researchers have also emphasized on China's financial involvement in the BRI targeted countries. Chen (2018) indicated that there is an increase in FDI across the BRI countries, particularly African countries. Similarly, Qian and Yu (2019) elaborated while the BRI impacted the Chinese OFDI flows positively, whereby there has been more Chinese involvement in the BRI countries compared to other countries from the construction and infrastructure, manufacturing, and trade-related sectors. Additionally, Kang and Zhu (2018) highlighted that for the period 2010-2015, China's OFDI in BRI countries is about 40% higher than in non-BRI countries. After the initiative, the Chinese FDI in BRI countries has increased by 46%, whereby African nations with a good historical, political and economic relationship with China have more strongly attracted China's OFDI.

Short-run Dynamics

Table 3: Short-run results of the VECM model

Variables	Coefficient	T-Statistic
D(LOG(FDI(-1)))	0.145206	2.16873
D(LOG(MSIZE(-1)))	0.355902	1.80019
D(LOG(RES(-1)))	-0.211997	-1.08053
D(LOG(TOPEN(-1)))	-0.137906	-0.62040
D(LOG(INFRAS(-1)))	-0.022706	-0.12292
D(CORR(-1))	-0.428523	-0.88492
D(BRI(-1))	0.084069	0.85782
ECT	0.002499	1.28671
C	0.223437	4.35524

Source: Author's computations

The positive and significant coefficient of the lagged dependent variables indicates the existence of dynamism in the system as it suggests that in the short run, the previous year's FDI affects the current year's Chinese investment in Africa. This aligns with Quazi's (2005) study which suggested that foreign investors are usually risk averse, hence they prefer to investment into familiar territories. Therefore, by having invested into the continent, Chinese investors are more familiar to the African economy and culture, which helps to dispel their fear over such FDI destinations and improve investors' confidence and optimism, whereby encouraging additional Chinese investment in Africa. Moreover, such dynamism indicates some remarkable "word of mouth" effects, from foreign direct investors to others in the short run.

It is also observed that resource availability, trade openness, infrastructure, corruption and the dummy variable are all insignificant in attracting FDI in the short run and suggest that these determinants are essentially long term in nature. The significant coefficient of market size consolidates that the latter plays an essential role Chinese FDI. This can be related to the FDI dynamism, whereby, Noorbakhsh et al. (2001) argued that several MNEs assess new market

opportunities by staggering their investments, which gradually reach the desired levels after some time adjustments. However, as reported by Ross' (2015) study, investors would prefer to choose new markets which are already quite large to target a larger customer base, which improves the likelihood of more successful and profitable foreign investments, hence explaining why Chinese market-seeking FDI in Africa in the short run.

Conclusion

Summary of results

The purpose of this study was to analyse the possible factors enhancing the attractiveness of Chinese FDI in the African region. Based upon a sample of 25 African countries over the period 2005 to 2017. It examined whether market size, resource availability, trade openness, infrastructure, corruption and Chinese BRI were significant determinants of the Chinese investment to Africa, using dynamic panel data analysis namely, a VECM framework. The results highlight that all the investigated determinants were found to be significant attracting FDI from China in Africa, with the exception of the trade openness. The findings therefore demonstrate that China's investment tends to be attracted to larger markets and natural resource rich areas in Africa, indicating market-seeking and resource-seeking investments, which is in line with KIPEJA (2015) and Gandhi (2019) works. Similarly, Chinese investors consider the host country's infrastructure in their FDI destination decisions as African countries with better mobile connectivity are reported to attract more Chinese FDI, which is in line with Kumar (2010). Corruption has an important and positive impact in attracting Chinese FDI in Africa, whereby it allows for "greasy" investments and ensures investors that they can circumvent certain aspects of the legal framework by bribing their way in, as elaborated by Saha (2001). This is something China has been accused of by several countries such as the US and this study shows that such Chinese "greasy" investments are taking place in Africa as well, whereby African leaders are ready to surrender to most of China's caprices, so as to attract their money.

Additionally, since it was announced in 2013, the BRI, has been positively significant in channelling Chinese investment in Africa, whereby Chinese firms have been more interested to invest in BRI-African countries which corroborates with the works of Chen (2018), depicting that that after the initiative, China increased investment in BRI countries, particularly African countries. Conversely, trade openness is reported to have an insignificant impact in attracting Chinese investment in Africa, justifying that Chinese FDI is resource and market seeking. This

study thus supplements the scarce existing empirical literatures on the specific studies of the determinants of Chinese FDI in Africa by i) using more recent data within a larger panel ii) by considering more potential determinants and ii) by also accounting for dynamism and potential endogenous relationship in FDI modelling.

Implications of the study

The findings show that China investments are market-seeking, and therefore, regional integration in Africa should be strengthen, and projects such as the AfCFTA, will certainly attract more investment. The AfCFTA aims at integrating the entire African continent into a Common market, and if successful, it would lead to much larger market opportunities for Chinese investors to profit from. Similarly, there is a need to make the resource-seeking investments be sustainable and not only deplete the reserves for Chinese profit only. Policies need to be implemented to ensure African are properly compensated for giving up their natural resources, which is not the case in countries like Nigeria, whereby their oil reserves are depleted and only a few top African government executives are making the most out of it.

Consequently, Africa needs to deal with their lack of corruption control. Having a loosed corruption control system played a favourable role in attracting Chinese FDI, whereby a corrupted investment framework might be good for Chinese investors, but it will certainly hinder the African's economic sustainability in the longer run. China has been accused of practicing neo-colonialism in Africa and having corrupted institutions might promote such practices. African institutions should rather focus onto other factors to attract foreign investment by easing transactions into their country, such as providing fiscal incentives much like tax rebates, financial incentives like preferential loans and other incentives such as market preferences to foreign investors to encourage them to come and invest in the economy.

Moreover, good infrastructures are important for attracting investment, whereby African countries lacking in natural resource endowments need to improve their infrastructure to attract non-resource based investment from China. Additionally, the BRI has been a key element in boasting FDI in Africa since 2013. However, while the Corona Virus breakout, African countries need to brace themselves for the huge FDI reductions, whereby the UNCTAD estimates global FDI to fall by 15% and with China channelling most of its funds into combating the Corona Virus, BRI-countries in Africa will suffer from tremendous declines of Chinese FDI for years to come. Hence, in the short term, it might be better if African countries shift emphasis from trying to attract Chinese FDI and focus on providing proper health care to

their citizens, and China will also be of considerable help in doing so, thus honouring the "Chinafrique" status.

The study is not without its limitations, due to the lack of data for many African countries, the choice for time period and proxies were impacted. Similarly, the proxy chosen for each determinant was compromised due to lack of data about several African aspects. For example, although the use of number of mobile subscription per 100 people is empirically backed as a measure of infrastructure, it fails to capture certain basic aspects such as transport and electricity.

References

Ado, A. and Su, Z. (2016), "China in Africa: a critical literature review", *Critical Perspectives on International Business*, Vol. 12 No. 1, pp. 40-60.

Agiomirgianakis, G. A. (2004). Aspects of Globalisation. *United States: Springer US*, 83-101.

Akpan, U. I. (2014). Determinants of Foreign Direct Investment. *African Governance and Development Institute AGDI Working Paper WP/14/002*.

Alden, C. (2012) China and Africa: A Distant Mirror of Latin America. *Colombia Internacional* 75. p.19-47

Alden, C., & Davies, M. (2006) A profile of the operations of Chinese multinationals in Africa. *South African Journal of International Affairs*. 13(1). p.83-96

Alon, T. M. (2010) Institutional Analysis and the Determinants of Chinese FDI. *The Multinational Business Review*. 18(3). p.1-24.

Anyanwu, J. C. (2012) Why Does Foreign Direct Investment Go Where It Goes? New Evidence from African Countries. *Annals of economic and finance*. 13(2). p.425-462.

Asiedu, E. (2006) Foreign direct investment in Africa: The role of natural resources, market size, government policy, institutions and political instability. *World Economy.* 29(1). p.63–77.

Asiedu. (2002). Determinants of Foreign Direct Investment to Developing Countries. *World development*.

Bailey, N. (2017), "Exploring the relationship between institutional factors and FDI attractiveness: A Meta-analytic review", *International Business Review*, Vol. 27 No. 1.

Bende-Nabende, A. (2002) Foreign Direct Investment determinants in Sub-Saharan Africa: A co-integration analysis. *Economic Bulletin*. 6(4). p.1-19.

Bezuidenhout, H., Claaßen, C., & Loots, A.E. (2012). Chinese foreign direct investment in Africa: making sense of a new economic reality.

Blonigen, B. (2005). A Review of Empirical Literature on FDI Determinants. *Atlantic Economic Journal , 33(4),* 383-403.

Brautigam (2008) China's African Aid. Transatlantic Challenges. *GMF Paper Series*. Washington DC: The German Marshall Fund of the United States.

Brautigam D. (2009) The Dragon's Gift. *The real story of China in Africa*. Oxford, UK: Oxford University Press.

Campbell, H. (2007). China in Africa: challenging US global hegemony. *Third World Quarterly*, 29(1), 89-105. doi:10.1080/01436590701726517.

Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regression. *Kyklos, Volume 54(1),* 89-114.

Chen, W., Dollar, D. and Tang, H. (2016), "Why is China investing in Africa? Evidence from the firm level", *The World Bank Economic Review*, pp. lhw049-lhw049.

Cheng L and Kwan Y. (2000). What are the Determinants of the Location of Foreign Direct Investment? The Chinese Experience. Journal of International Economics.51: 379-400.

Cheung Y.W., de Haan, J., Qian, X. W. & Yu S. (2011) China´s Outward Direct Investment in Africa. *HKIMR Working Paper*. 13.

Cheung, Y.W., De Haan, J., Qian, X. and Yu, S. (2012), "China's outward direct investment in Africa", *Review of International Economics*, Vol. 20 No. 2, pp. 201-220.

Chiappini, R. (2014). Institutional determinants of Japanese outward FDI in the manufacturing Industry . *GREDEG-CNRS*, 1-26.

Claassen, C., Loots, E., Bezuidenhout, H. (2012). Chinese foreign direct investment in Africa: Making sense of a new economic reality. *African Journal of Business Management*, 6(47), 11583-11597. doi: 10-5897/AJBM12.279.

Davies, M.J. (2009). Editorial. The China Monitor, 38. Stellenbosch, South Africa: Centre for Chinese Studies.

de Jonge, A. (2016), "Australia-China-Africa investment partnerships: a new frontier for triangular cooperation?", *Critical Perspectives on International Business*, Vol. 12 No. 1, pp. 61-82.

Demirhan, E. a. (2008). Determinants of foreign direct investment flows to developing countries: a cross sectional analysis . *Prague Economic Papers* , vol 2008 no.4 356-369.

Denisia, V. (2010). Foreign Direct Investment Theories: An Overview of the Main FDI Theories . *European Journal of Interdisciplinary Studies*, 2(2). p.104-110.

Drogendjik, R. & Blomkvist, K. (2013) Drivers and Motives for Chinese Foreign Direct Investment in Africa. *Journal of African Business*. 14(2). P.75-84.

Dunning, J. (1993). Multinational Enterprises and the Global Economy. *Boston, Ma: Addison Wesley*.

Dunning. (1976). Trade Location and Economic Activity and the MNE: A Search for an Eclectic Approach. The International Allocation of Economic Activity. *London: Macmillan.*

Dunning. (1994). Re-evaluating the benefits of foreign direct investment. Retrieved from m http://unctad.org/en/PublicationChapters/iteiitv3n1a3_en.pdf

Egger, P. and Winner, H. (2006), "How corruption influences foreign direct investment: a panel data study", *Economic Development and Cultural Change*, Vol. 54 No. 2, pp. 459-486.

FMPRC (2015). The Forum on China-Africa Cooperation Johannesburg Action Plan (2016-2018). Retrieved on November 13, 2019 from: http://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1323159.shtml.

Forsgren, M. (2013). Theories of the Multinational Firm. *JOUR.*

Foster V., Butterfield W., Chen C. & Pushak, N. (2009) Building Bridges. *China´s Growing Role as Infrastructure Financier for Sub-Saharan Africa*. Washington DC: The International Bank for Reconstruction and Development/The World Bank.

Fung, K. and Garcia-Herrero, A. (2012), "Foreign direct investment outflows from China and India", *China Economic Policy Review*, Vol. 01 No. 1, pp. 60-75.

Gasanova, A. M. (2017). The assessment of corruption impact on the inflow of foreign direct investment. *AIP Conference Proceedings 1836,020011.*

Gu, J. (2009), "China's private enterprises in Africa and the implications for African development", *The European Journal of Development Research*, Vol. 21 No. 4, pp. 570-587.

Huff, K. (2000). Developing Country Concerns and Multilateral Trade. *CATRN Paper 2, Canadian Agricultural Network – Food Trade Research.*

Hymer, S. H. (1976). The International Operations of National Firms: A Study of Direct Foreign Investment.

Kaplinsky R. & Morris M. (2015) Chinese FDI in Sub-Saharan Africa: Engaging with Large Dragons. *European Journal of Development Research*. 21(4). p. 551-569.

Kaushik, S. (2016, 1 11). *Picture Trade: Types of tariffs explained*. Retrieved from World Bank Blogs: https://blogs.worldbank.org/trade/picture-trade-types-tariffs-explained

Kawaguchi, O. (1994). Foreign Direct Investment in East Asia: Trends, Determinants and Policy Implications. *Internal discussion*, 139.

Khan and Khachoo, K. A. (2012). Determinants of FDI inflows to developing countries: a panel data analysi. *Munich Personal RePEc Archive Paper*, 37278.

Kinyondo, S. a. (2012). Determinants of Foreign Direct Investment in Africa: A Panel Data Analysis. *Global Journal of Management And Business Research*. Retrieved March 17, 2020, from https://journalofbusiness.org/index.php/GJMBR/article/view/835

Kleiner, B. (2001). Macroergonomics: An Introduction to Work System Design. *Human Factors and Ergonomics Society*.

Kolstad, I. & Wiig, A. (2011) Better the devil you know? Chinese Foreign Direct Investment in Africa. *Journal of African Business*. 12(1). p. 31-50.

Kyereboah-Coleman, A., & Agyire-Tettey, K. F. (2008). Effect of Exchange-Rate Volatility on Foreign Direct Investment in Sub-Saharan Africa: The case of Ghana. The Journal of Risk Finance, 9(1), 52–70. https://doi.org/10.1108/15265940810842410

Lin, C. (2018). Foreign Investment across the Belt and Road. *Policy Research Working Paper*.

Loree D W, Guisinger S. (1995). *Policy and Non-Policy Determinants of U.S. equity Foreign Direct Investment*. Journal of International Business Studies 26 (2), 281-299.

Macau Daily Times (2016). West Africa seeks funds from China for transport projects. Retrieved from http://macaudailytimes.com.mo/west-africa-seeks-funds-china-transportprojects.html

McKinsey (2018) The rise of the Chinese in Africa. A report from McKinsey's Chinese-Africa relationship. [Accessed: 3rd November 2019]

MOFCOM (2019) 2017 Statistical bulletin of China´s Outward Foreign Direct Investment, Beijing: Ministry of Foreign Commerce.

Morisset, J. P. (2000) Foreign direct investment in Africa: policies also matter. *World Bank Policy Research Working Paper*, 2481.

Naudé, W.A. and Krugell, W.F. (2007), "Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data", *Applied Economics*, Vol. 39 No. 10, pp. 1223-1233.

ODI. (1997). Foreign Direct Investment Flows to Low-Income Countries: A Review of the Evidence.

Ogunkola, E. O. (1998). An Empirical Evaluation of Trade Potential in The Economic Community Of West African States. *AERC Research Paper No.84*.

Olayungbo, D. (2018). Dynamic relationships among non-oil revenue, government spending and economic growth in an oil producing country: Evidence from Nigeria. *Future Business Journal*.

Paul, J. & Feliciano-Cestero M.M. (2020). Five decades of research on foreign direct investment by MNEs: An overview and research agenda, Journal of Business Research. 2020 Apr, doi: 10.1016/j.jbusres.2020.04.017 [Epub ahead of print]

Pedroni. (1999). Oxford Bulletin of Economics and Statistics . *Econometric Theory*.

Peres, M. A. (2018). The impact of institutional quality on foreign direct investment inflows: evidence for developed and developing countries. *Economic Research – Ekonomska Istrazivanja*, 626-644.

Porter, G. a. (2008). *Basic Econometrics, Economics series.* McGraw-Hill Irwin.

Ralf k. and Mold A (2005). *"The role of foreign direct investment (FDI) in private sector development*" in ECA Policy Research Report "Unleashing the Private Sector in Africa", (Draft version) 2005.

Renard (2011) China´s Trade and FDI in Africa. *African Development Bank Group Working Paper*. 126.

Saunders, M. L. (2009). Research Methods for Business Students. *Pearson, New York*.

Schoeman N, Robinson J, Clausen Z, DeWet T J. (2000). Foreign Direct Investment Flows and Fiscal Discipline in South Africa. South African Journal of Economic and Management Sciences, 3(2), 235-44.

Scott, J. (2015, 10 13). Multilateralism. *Encyclopædia Britannica*. Retrieved 03 20, 2020, from https://www.britannica.com/topic/multilateralism

Smarzynska, B. a.-J. (2000). Corruption and Composition of Foreign Direct Investment: Firm-Level Evidence. *NBER Working Papers*.

Staden, C. v. (2018). China Africa Project . *ChinaFile*.

State Council (2013) China-Africa Economic and Trade Cooperation. *White paper*. Information Office of the State Council, People´s Republic of China, Beijing.

Stefanidou, E. (2012). Regionalism versus Multilateralism. 13. Retrieved from https://dspace.lib.uom.gr/bitstream/2159/15369/3/StephanidouEleniMsc2012.pdf

Suliman. A.H, V.A.Mollick, Human Capital Development, War and Foreign Direct Investment in Sub-Saharan Africa, Oxford Development Studies. 37(1) (2009) 47-61.

Taylor, Ian (2009*) China´s New Role in Africa*. Colorado, US: Lynne Rienner Publishers, Inc. London, UK: Lynne Rienner Publishers, Inc.

Tokunaga M., & Iwasaki I (2017). The Determinants of Foreign Direct Investment in Transition Economies: A Meta-analysis, The World Economy, 40(12), Pages 2771-2831

UNCTAD (2013a) *Global investment trends monitor: The rise of the BRICS FDI and Africa*. New York and Geneva: United Nations.

UNCTAD (2019). FDI Statistics. Retrieved from http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDIStatistics.aspx.

UNCTAD. (2019). *UNCTAD Handbook of Statistics 2019.* unctad.

Van Dijk, M.P. (2009) *The New Presence of China in Africa*. Amsterdam: Amsterdam University Press.

Verbeek, M. (2008). A Guide to Modern Econometrics. *Nauchnaya Kniga*.

Vernon, R. (1966, 05 01). International Investment and International Trade in the Product Cycle. *The Quarterly Journal of Economics, 80*(2), 190-207. doi:https://doi.org/10.2307/1880689

Voss. (2011). The determinants of Chinese outward direct investment. . *Cheltenham, UK*.

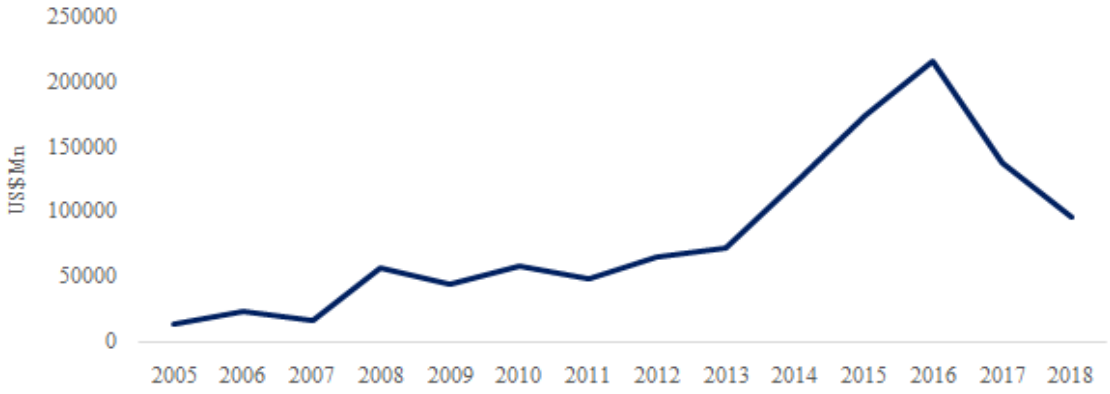
Wei S. (2000). How Taxing is Corruption on International Investors? Review of Economics and Statistics 82 (1): 1-11.

WTO, W. T. (2010). *Principles o f the trading system*. Retrieved from World Trade Organisation.

WU, H. L. & CHEN, C.H. (2001) An Assessment of Outward Foreign Direct Investment from China's Transnational Economy. *Europe-Asia studies*. 53(8). p.1235-1254.

ZHANG, J., WEI, W.X. AND LIU, Z. (2013), "Strategic entry and determinants of Chinese private enterprises into Africa", *Journal of African Business*, Vol. 14 No. 2, pp. 96-105

Appendix 1: Chinese Outward FDI



Data Source: World Bank